

SHOW FILES

File 652:US Patents Fulltext 1971-1975

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File 654:US Pat.Full. 1976-2006/Oct 26


(c) Format only 2006 Dialog

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| Set | Items | Description |
|-----|-------|--|
| S1 | 0 | PD<=040209 AND (TRANSFER? (2) CASE?) AND (SECOND (2W) CLUTCH? (2W) TORQUE) AND (FIRST (2W) CLUTCH? (2W) TORQUE) AND (CLUTCH? (2N) SLIP?) |
| S2 | 0 | PD<=040209 AND (TRANSFER? (2W) CASE?) AND (SECOND (2W) CLUTCH? (2W) TORQUE) AND (FIRST (2W) CLUTCH? (2W) TORQUE) AND (CLUTCH? (2N) SLIP?) |
| S3 | 0 | PD<=040209 AND (TRANSFER? (4W) CASE?) AND (SECOND (4W) CLUTCH? (4W) TORQUE) AND (FIRST (4W) CLUTCH? (4W) TORQUE) AND (CLUTCH? (4N) SLIP?) |
| S4 | 5 | (CONTROL? (2W) CLUTCH?) AND (TRANSFER? (4W) CASE?) AND (SECOND (4W) CLUTCH? (4W) TORQUE) AND (FIRST (4W) CLUTCH? (4W) TORQUE) AND (CLUTCH? (4N) SLIP?) |
| S5 | 0 | S4 AND ((ADD? OR TOTAL? OR SUM?) (4N) TORQUE) |

10/774866

| Set | Items | Description |
|-----|-------|--|
| S1 | 1860 | PD<=040209 AND ((CHANG? OR CONVERT? OR TRANSFORM? OR EDIT?) (S) (CLUTCH? (S) FIRST? (S) SECOND?)) |
| S2 | 6 | S1 AND ((CHANG? OR CONVERT? OR TRANSFORM? OR EDIT?) (S) (C- LUTCH? (S) FIRST? (S) SECOND?)) (S) (SUM? OR TOTAL? OR ADD?) (- S) (CLUTCH? (2N) TORQUE) |
| S3 | 0 | S2 AND (FIRST? (S) SECOND? (S) (SUM? OR TOTAL? OR ADD?) (4N) (CLUCTCH? (2N) TORQUE)) |
| ? | | |



S S2 AND (FIRST? (S) SECOND? (S) (SUM? OR TOTAL? OR ADD?) (4N) (CLUCTCH? (2N) TORQUE)

Processing

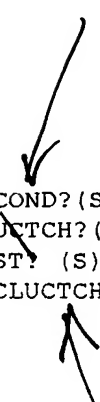
Processing

Processing

Processing

Processing

6 S2
4620472 FIRST?
4667484 SECOND?
281308 SUM?
527358 TOTAL?
1985868 ADD?
14 CLUCTCH?
138776 TORQUE
0 FIRST?(S)SECOND?(S)((SUM? OR TOTAL?) OR
ADD?)(4N)CLUCTCH?(2N)TORQUE
S3 0 S2 AND (FIRST? (S) SECOND? (S) (SUM? OR TOTAL? OR
ADD?)(4N) (CLUCTCH? (2N) TORQUE))



?

T S2/3,KWIC/1-6

2/3,KWIC/1 (Item 1 from file: 340)
DIALOG(R) File 340:CLAIMS(R)/US Patent
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1498998 2402958

M/TORQUE CONVERTER CLUTCH WITH A TORQUE REVERSAL RELEASE VALVE ASSEMBLY

Inventors: VAN EE RICHARD J (US)

Assignee: GENERAL MOTORS CORP

Assignee Code: 33984

Attorney, Agent or Firm: Scherer, Donald F

| Publication Number | Kind | Date | Application Number | Date |
|------------------------------|------|----------|-----------------------|----------|
| US 4427099 | A | 19840124 | US 81314208 | 19811023 |
| (Cited in 001 later patents) | | | | |

Priority Applic:

US 81314208 19811023

Calculated Expiration: 20011023

CERTIFICATE OF CORRECTION: 19841106

Legal Status: **EXPIRED**

(See File 123 for legal status details)

Publication (No,Kind,Date), Applic (No,Date):

... 19840124

Exemplary Claim:

1. A torque converter clutch and release valve assembly, subjected to either engine driven forward torque or vehicle driven reverse torque during clutch engagement, comprising: a torque converter ; a clutch pressure plate disposed in the torque converter and bounded by an apply chamber on one side and a release chamber on the other side, said pressure plate engaging the input of the torque converter when the apply chamber is pressurized and the release chamber is exhausted; a vibration damper mechanism drivingly connected between the clutch pressure plate and the torque converter ; a pair of valve means disposed on said pressure plate for normally preventing communication between...

...chambers when forward torque is being transmitted, sequential release means on said damper mechanism comprising first actuator cam means for opening one of said valve means when a predetermined amount of...

...apply and release chambers to effectively increase the pressure level of the release chamber; and second actuator cam means for opening the other of said valve means when a predetermined increase...

Non-exemplary Claims:

2. A torque converter clutch and release valve assembly, subjected to either engine driven forward torque or vehicle driven reverse torque during clutch engagement, comprising: a torque converter ; a clutch pressure plate disposed in the torque converter and bounded by an apply chamber on one side and a release chamber on the other side, said pressure plate engaging the input of the torque converter when the apply chamber is pressurized and the release chamber is exhausted; a vibration damper mechanism drivingly connected between the clutch pressure plate and the torque converter ; a pair of valve means disposed on said pressure plate for normally preventing communication between...

...said openings being larger than the other; sequential release means on

said damper mechanism comprising first actuator cam means for opening one of said valve means when a predetermined amount of...

...apply and release chambers to effectively increase the pressure level of the release chamber; and second actuator cam means for opening the other of said valve means when a predetermined increase...

...3. A torque converter clutch and release valve assembly, subjected to either engine driven forward torque or vehicle driven reverse torque during clutch engagement, comprising; a torque converter; a clutch pressure plate disposed in the torque converter and bounded by an apply chamber on one side and a release chamber on the other side, said pressure plate engaging the input of the torque converter when the apply chamber is pressurized and the release chamber is exhausted; a vibration damper mechanism drivingly connected between the clutch pressure plate and the torque converter; a pair of valve means disposed on said pressure plate for normally preventing communication between...

...chambers when forward torque is being transmitted; sequential release means on said damper mechanism comprising first actuator cam means for opening one of said valve means when a predetermined amount of...

...apply and release chambers to effectively increase the pressure level of the release chamber; and second actuator cam means for opening the other of said valve means when a predetermined increase in the amount of reverse torque from the predetermined amount is present resulting in an additional 5* angular displacement for providing increased fluid communication between the apply and release chambers...

2/3,KWIC/2 (Item 2 from file: 340)

DIALOG(R) File 340:CLAIMS(R)/US Patent

(c) 2006 IFI/CLAIMS(R). All rts. reserv.

1128186 1807682

M/DRIVING SIMULATOR

Inventors: FOREST REINER (N/A)

Assignee: UNASSIGNED OR ASSIGNED TO INDIVIDUAL

Assignee Code: 68000

Attorney, Agent or Firm: Becker, Walter

| Publication Number | Kind | Date | Application Number | Date |
|------------------------------|------|----------|-----------------------|----------|
| US 4077138 | A | 19780307 | US 76686113 | 19760513 |
| (Cited in 014 later patents) | | | | |

Priority Applic:

DE 2521103

19750513

Calculated Expiration: 19950307

Publication (No,Kind,Date), Applic (No,Date):

... 19780307

Non-exemplary Claims:

...the road picture, as well as using control devices such as accelerator pedal, brake pedal, clutch pedal, and steering wheel, and means for providing signals responsive to the various control devices...
...supplying not only the speed signal but also the signal for the engine rotation, the clutch gripping or not gripping, means for programming a digital curve sequence generator, phase locking means...

...elements and is functioning in principle like said curve function generators, and which generates an additional voltage being proportional to the curvature of the road, a subtraction device by which said additional voltage is subtracted from a voltage proportional to the angle of the steering wheel, a...said switch, and the inputs of which are the signals SAS and SFe, a further first -grade delay circuit, the steady state amplification factor of which is defined by the damping...

...and the output of which is the rotation signal n, a switch actuated by the clutch signal KKU, by which the input of said delay circuit can be switched over, a...

...the rotation signal n as the actual value, and the speed signal, reduced by a second evaluation circuit, as the reference value, the output of the control amplifier being connected to the input of the delay circuit with gripping clutch, and the torque signal m being connected to said delay circuit with opening clutch, several threshold devices to the inputs of which the rotation signal n is supplied and...

...of which are the outputs of said threshold devices and the outputs of which are added by an adding device, a subtracting device by which the output of said adding device is subtracted from the voltage UGas which is supplied by the acceleration pedal, the...

...SSch supplied by the gear shift only when a signal SKu is given by the clutch pedal, and the output of which circuit supplies the signal SG for the determination of the effective gear, a differential circuit converting the speed signal into an acceleration signal b which is supplied to a polarity inverter...

...which the switched excessive deceleration signal is supplied and the output URu of which is added to the input of said known delay circuit

...

2/3,KWIC/3 (Item 3 from file: 340)

DIALOG(R)File 340:CLAIMS(R)/US Patent

(c) 2006 IFI/CLAIMS(R). All rts. reserv.

0987052 1604610

M/POWER TRAIN INCLUDING A TORQUE-PRESSURE TRANSDUCER

Inventors: VAN GORDER JACK H (N/A)

Assignee: GENERAL MOTORS CORP

Assignee Code: 33984

Attorney, Agent or Firm: Moran, John P

| Publication Number | Kind | Date | Application Number | Date |
|------------------------------|------|----------|-----------------------|----------|
| US 3937104 | A | 19760210 | US 74487775 | 19740711 |
| (Cited in 001 later patents) | | | | |

Priority Applic:

US 74487775 19740711

Calculated Expiration: 19930210

Publication (No,Kind,Date), Applic (No,Date):

... 19760210

Exemplary Claim:

1. A torque-pressure transducer for use with a power train including a

torque converter , a clutch , a shift valve, a source of fluid under pressure, a mainshaft, and a hollow turbine shaft operatively connected between said torque converter and said clutch for driving said mainshaft when said clutch is engaged, said torque-pressure transducer comprising a transducer shaft mounted in said hollow turbine...

...shift valve.

4. A torque-pressure transducer for use with a power train including a torque converter , a clutch , a shift valve, a source of fluid under pressure, a mainshaft, and a hollow turbine shaft operatively connected between said torque converter and said clutch for driving said mainshaft when said clutch is engaged, said torque-pressure transducer comprising a transducer shaft mounted in said hollow turbine...

...said openings formed in said transducer shaft, with said tabs on alternate cam members extending additionally into said openings formed in said turbine shaft so as to be axially spreadable in...

...spreadable cam members for regulating said fluid under pressure, an external closed-loop modulator valve, first conduitry means communicating regulated fluid from said regulating valve to said modulator valve, and second conduitry means communicating modulated fluid from said modulator valve to said shift valve.

Non-exemplary Claims:

...3. A torque-pressure transducer for use with a power train including a torque converter , a clutch , a shift valve, a source of fluid under pressure, a mainshaft, and a hollow turbine shaft operatively connected between said torque converter and said clutch for driving said mainshaft when said clutch is engaged, said torque-pressure transducer comprising a transducer shaft mounted in said hollow turbine...

...torque-responsive twist between said shafts, closed-loop regulating valve means mounted in said chamber, first resilient means mounted between the end cam member and a shoulder formed on said transducer shaft for maintaining a predetermined load on said cam members, second resilient means mounted between said end cam member and said closed-loop regulating valve means, said regulating valve means being responsive through said second resilient means to any change in overall lengths of said axially spreadable cam members for regulating said fluid under pressure, closed-loop modulator valve means, first conduitry means communicating regulated fluid from said regulating valve means to said modulator valve means, and second conduitry means communicating modulated fluid from said modulator valve means to said shift valve.

2/3,KWIC/4 (Item 1 from file: 341)

DIALOG(R)File 341:CLAIMS(R)/UNITERM

(c) 2006 IFI/CLAIMS(R). All rts. reserv.

1498998 2402958

M/TORQUE CONVERTER CLUTCH WITH A TORQUE REVERSAL RELEASE VALVE ASSEMBLY

Inventors: VAN EE RICHARD J (US)

Assignee: GENERAL MOTORS CORP

Assignee Code: 33984

Attorney, Agent or Firm: Scherer, Donald F

| Publication Number | Kind | Date | Application Number | Date |
|-----------------------|------|----------|-----------------------|----------|
| US 4427099 | A | 19840124 | US 81314208 | 19811023 |

(Cited in 001 later patents)

Priority Applic:

US 81314208

19811023

Calculated Expiration: 20011023

CERTIFICATE OF CORRECTION: 19841106

Legal Status: **EXPIRED**

(See File 123 for legal status details)

Publication (No,Kind,Date), Applic (No,Date):

... 19840124

Exemplary Claim:

1. A torque converter clutch and release valve assembly, subjected to either engine driven forward torque or vehicle driven reverse torque during clutch engagement, comprising; a torque converter ; a clutch pressure plate disposed in the torque converter and bounded by an apply chamber on one side and a release chamber on the other side, said pressure plate engaging the input of the torque converter when the apply chamber is pressurized and the release chamber is exhausted; a vibration damper mechanism drivingly connected between the clutch pressure plate and the torque converter ; a pair of valve means disposed on said pressure plate for normally preventing communication between...

...chambers when forward torque is being transmitted, sequential release means on said damper mechanism comprising first actuator cam means for opening one of said valve means when a predetermined amount of...

...apply and release chambers to effectively increase the pressure level of the release chamber; and second actuator cam means for opening the other of said valve means when a predetermined increase...

Non-exemplary Claims:

2. A torque converter clutch and release valve assembly, subjected to either engine driven forward torque or vehicle driven reverse torque during clutch engagement, comprising; a torque converter ; a clutch pressure plate disposed in the torque converter and bounded by an apply chamber on one side and a release chamber on the other side, said pressure plate engaging the input of the torque converter when the apply chamber is pressurized and the release chamber is exhausted; a vibration damper mechanism drivingly connected between the clutch pressure plate and the torque converter ; a pair of valve means disposed on said pressure plate for normally preventing communication between...

...said openings being larger than the other; sequential release means on said damper mechanism comprising first actuator cam means for opening one of said valve means when a predetermined amount of...

...apply and release chambers to effectively increase the pressure level of the release chamber; and second actuator cam means for opening the other of said valve means when a predetermined increase...

...3. A torque converter clutch and release valve assembly, subjected to either engine driven forward torque or vehicle driven reverse torque during clutch engagement, comprising; a torque converter ; a clutch pressure plate disposed in the torque converter and bounded by an apply chamber on one side and a release chamber on the other side, said pressure plate engaging the input of the torque converter when the apply chamber is pressurized and the release chamber is exhausted; a vibration damper mechanism drivingly connected between the clutch pressure plate and the torque converter ; a pair of valve means disposed on said pressure plate for normally preventing communication

between...

...chambers when forward torque is being transmitted; sequential release means on said damper mechanism comprising first actuator cam means for opening one of said valve means when a predetermined amount of...

...apply and release chambers to effectively increase the pressure level of the release chamber; and second actuator cam means for opening the other of said valve means when a predetermined increase in the amount of reverse torque from the predetermined amount is present resulting in an additional 5* angular displacement for providing increased fluid communication between the apply and release chambers...

2/3,KWIC/5 (Item 2 from file: 341)

DIALOG(R) File 341:CLAIMS(R)/UNITERM

(c) 2006 IFI/CLAIMS(R). All rts. reserv.

1128186 1807682

M/DRIVING SIMULATOR

Inventors: FOREST REINER (N/A)

Assignee: UNASSIGNED OR ASSIGNED TO INDIVIDUAL

Assignee Code: 68000

Attorney, Agent or Firm: Becker, Walter

| Publication Number | Kind | Date | Application Number | Date |
|------------------------------|------|----------|-----------------------|----------|
| US 4077138 | A | 19780307 | US 76686113 | 19760513 |
| (Cited in 014 later patents) | | | | |

Priority Applic:

DE 2521103

19750513

Calculated Expiration: 19950307

Publication (No,Kind,Date), Applic (No,Date):

... 19780307

Non-exemplary Claims:

...the road picture, as well as using control devices such as accelerator pedal, brake pedal, clutch pedal, and steering wheel, and means for providing signals responsive to the various control devices...

...supplying not only the speed signal but also the signal for the engine rotation, the clutch gripping or not gripping, means for programming a digital curve sequence generator, phase locking means...

...elements and is functioning in principle like said curve function generators, and which generates an additional voltage being proportional to the curvature of the road, a subtraction device by which said additional voltage is subtracted from a voltage proportional to the angle of the steering wheel, a...said switch, and the inputs of which are the signals SAS and SFe, a further first -grade delay circuit, the steady state amplification factor of which is defined by the damping...

...and the output of which is the rotation signal n, a switch actuated by the clutch signal Kku, by which the input of said delay circuit can be switched over, a...

...the rotation signal n as the actual value, and the speed signal, reduced by a second evaluation circuit, as the reference value, the output of the control amplifier being connected to the input of the delay circuit with gripping clutch, and the torque signal m being connected to

said delay circuit with opening clutch , several threshold devices to the inputs of which the rotation signal n is supplied and...

...of which are the outputs of said threshold devices and the outputs of which are added by an adding device, a subtracting device by which the output of said adding device is subtracted from the voltage UGas which is supplied by the acceleration pedal, the...

...SSch supplied by the gear shift only when a signal SKu is given by the clutch pedal, and the output of which circuit supplies the signal SG for the determination of the effective gear, a differential circuit converting the speed signal into an acceleration signal b which is supplied to a polarity inverter...

...which the switched excessive deceleration signal is supplied and the output URu of which is added to the input of said known delay circuit ...

2/3,KWIC/6 (Item 3 from file: 341)

DIALOG(R)File 341:CLAIMS(R)/UNITERM

(c) 2006 IFI/CLAIMS(R). All rts. reserv.

0987052 1604610

M/POWER TRAIN INCLUDING A TORQUE-PRESSURE TRANSDUCER

Inventors: VAN GORDER JACK H (N/A)

Assignee: GENERAL MOTORS CORP

Assignee Code: 33984

Attorney, Agent or Firm: Moran, John P

| Publication Number | Kind | Date | Application Number | Date |
|---------------------------------|------|----------|-----------------------|----------|
| US 3937104 | A | 19760210 | US 74487775 | 19740711 |
| (Cited in 001 later patents) | | | | |
| Priority Applic: | | | US 74487775 | 19740711 |
| Calculated Expiration: 19930210 | | | | |

Publication (No,Kind,Date), Applic (No,Date):
... 19760210

Exemplary Claim:

1. A torque-pressure transducer for use with a power train including a torque converter , a clutch , a shift valve, a source of fluid under pressure, a mainshaft, and a hollow turbine shaft operatively connected between said torque converter and said clutch for driving said mainshaft when said clutch is engaged, said torque-pressure transducer comprising a transducer shaft mounted in said hollow turbine...

...shift valve.

4. A torque-pressure transducer for use with a power train including a torque converter , a clutch , a shift valve, a source of fluid under pressure, a mainshaft, and a hollow turbine shaft operatively connected between said torque converter and said clutch for driving said mainshaft when said clutch is engaged, said torque-pressure transducer comprising a transducer shaft mounted in said hollow turbine...

...said openings formed in said transducer shaft, with said tabs on alternate cam members extending additionally into said openings formed in said turbine shaft so as to be axially spreadable in...

...spreadable cam members for regulating said fluid under pressure, an external closed-loop modulator valve, first conduitry means communicating regulated fluid from said regulating valve to said modulator valve, and second conduitry means communicating modulated fluid from said modulator valve to said shift valve.

Non-exemplary Claims:

...3. A torque-pressure transducer for use with a power train including a torque converter, a clutch, a shift valve, a source of fluid under pressure, a mainshaft, and a hollow turbine shaft operatively connected between said torque converter and said clutch for driving said mainshaft when said clutch is engaged, said torque-pressure transducer comprising a transducer shaft mounted is said hollow turbine...

...torque-responsive twist between said shafts, closed-loop regulating valve means mounted in said chamber, first resilient means mounted between the end cam member and a shoulder formed on said transducer shaft for maintaining a predetermined load on said cam members, second resilient means mounted between said end cam member and said closed-loop regulating valve means, said regulating valve means being responsive through said second resilient means to any change in overall lengths of said axially spreadable cam members for regulating said fluid under pressure, closed-loop modulator valve means, first conduitry means communicating regulated fluid from said regulating valve means to said modulator valve means, and second conduitry means communicating modulated fluid from said modulator valve means to said shift valve.

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S PD<=040209 AND (TRANSFER? (2W) CASE?) AND (SECOND (2W) CLUTCH? (2W) TORQUE) AND (F
SLIP?)
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>>> started at PD=A stopped at PD=19821124
Processing
Processing
Processing
Processing
Processing
Processing
Processing
768867 PD<=040209
1529381 TRANSFER?
3063642 CASE?
8267 TRANSFER? (2W) CASE?
3693741 SECOND
111382 CLUTCH?
251630 TORQUE
175 SECOND (2W) CLUTCH? (2W) TORQUE
3999557 FIRST
111382 CLUTCH?
251630 TORQUE
192 FIRST (2W) CLUTCH? (2W) TORQUE
111382 CLUTCH?
328026 SLIP?
10871 CLUTCH? (2N) SLIP?
S2 0 PD<=040209 AND (TRANSFER? (2W) CASE?) AND (SECOND (2W)
CLUTCH? (2W) TORQUE) AND (FIRST (2W) CLUTCH? (2W) TORQUE)
AND (CLUTCH? (2N) SLIP?)
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S PD<=040209 AND (TRANSFER? (4W) CASE?) AND (SECOND (4W) CLUTCH? (4W) TORQUE) AND (F
SLIP?)
>>>File 654 processing for PD= : PD=040209
>>> started at PD=A stopped at PD=19821124
Processing
Processing
Processing
Processing
Processing
Processing
768867 PD<=040209
1529381 TRANSFER?
3063642 CASE?
21216 TRANSFER? (4W) CASE?
3693741 SECOND
111382 CLUTCH?
251630 TORQUE
581 SECOND (4W) CLUTCH? (4W) TORQUE
3999557 FIRST
111382 CLUTCH?
251630 TORQUE
585 FIRST (4W) CLUTCH? (4W) TORQUE
111382 CLUTCH?
328026 SLIP?
12926 CLUTCH? (4N) SLIP?
S3 0 PD<=040209 AND (TRANSFER? (4W) CASE?) AND (SECOND (4W)
CLUTCH? (4W) TORQUE) AND (FIRST (4W) CLUTCH? (4W) TORQUE)
AND (CLUTCH? (4N) SLIP?)
```

4/3,AB/1 (Item 1 from file: 654)

DIALOG(R)File 654:US Pat.Full.

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6656758

Derwent Accession: 2005-347878

UTILITY

Two-speed transfer case with adaptive clutch control

Inventor: Mueller, Joseph G., Balston Spa, NY, US

Thomas, Gareth, Banbury Oxfordshire, GB

Assignee: Magna Powertrain USA, Inc., (02), Troy, MI, US

Examiner: Estremsky, Sherry

Legal Representative: Harness, Dickey & Pierce P.L.C.

| | Publication Number | Kind | Date | Application Number | Filing Date |
|--------------|-----------------------|------|----------|-----------------------|----------------|
| Main Patent | US 7081064 | B2 | 20060725 | US 200574364 | 20050307 |
| Related Publ | US 20050145063 | A1 | 20050707 | | |
| Continuation | US 6905436 | A | | US 2003696944 | 20031030 |

Fulltext Word Count: 11864

Abstract:

[00000] A transfer case having an input shaft driven by a powertrain, a first output shaft adapted for connection to a first driveline, a second output shaft adapted for connection to a second driveline, an interaxle differential operably disposed between the input shaft and the first and second output shafts, and a torque transfer mechanism. The torque transfer mechanism includes a friction clutch assembly operably disposed between the first output shaft and the second output shaft, and a clutch actuator assembly for generating and applying a clutch engagement force to the friction clutch assembly. The clutch actuator assembly includes an electric motor, a geared reduction unit, and a clutch apply operator. A control system including vehicle sensors and a controller are provided to control actuation of the electric motor.

4/3,AB/2 (Item 2 from file: 654)

DIALOG(R)File 654:US Pat.Full.

(c) Format only 2006 Dialog. All rts. reserv.

6211579

Derwent Accession: 2005-570505

UTILITY

Method and apparatus for controlling a transfer case clutch to improve vehicle handling

Inventor: Rodrigues, Ashok, Farmington, MI, US

Allen, Timothy, Livonia, MI, US

Thomas, Steven, Bloomfield Hills, MI, US

Assignee: Unassigned

Correspondence Address: FORD GLOBAL TECHNOLOGIES, LLC., SUITE 600 -

PARKLANE TOWERS EAST, ONE PARKLANE BLVD., DEARBORN, MI, 48126, US

| | Publication Number | Kind | Date | Application Number | Filing Date |
|-------------|-----------------------|------|----------|-----------------------|----------------|
| Main Patent | US 20050177295 | A1 | 20050811 | US 2004774866 | 20040209 |

Fulltext Word Count: 10457

Abstract:

[00000] In a motor vehicle driveline having an automatic transmission driveably connected to a transfer case whose output is continually connected to a first output, a clutch, selectively engaged in response to a control signal, driveably connects a second output to the first output. A digital computer continually monitors the occurrence of a change of clutch slip, input torque and a torque rate change to control the torque transmitted by the clutch to the second output. The control causes the clutch to transmit torque to the second output having a constant fraction of the input clutch torque and another portion that is proportional to the clutch slip. This result simulates the torque slip characteristics produced by transfer case having both a center differential mechanism and a viscous clutch.

4/3,AB/3 (Item 3 from file: 654)

DIALOG(R)File 654:US Pat.Full.

(c) Format only 2006 Dialog. All rts. reserv.

6211578

Derwent Accession: 2005-570504

UTILITY

Method and system for controlling a transfer case clutch to protect against excessive heat

Inventor: Jiang, Hong, Canton, MI, US

Sankpal, Bal, Canton, MI, US

Thomas, Steven, Bloomfield Hills, MI, US

Allen, Timothy, Livonia, MI, US

Assignee: Unassigned

Correspondence Address: MACMILLAN, SOBANSKI & TODD, LLC, ONE MARITIME PLAZA

- FOURTH FLOOR, 720 WATER STREET, TOLEDO, OH, 43604, US

| | Publication Number | Kind | Date | Application Number | Filing Date |
|-------------|-----------------------|------|----------|-----------------------|----------------|
| | ----- | -- | ----- | ----- | ----- |
| Main Patent | US 20050177294 | A1 | 20050811 | US 2004774805 | 20040209 |

Fulltext Word Count: 10779

Abstract:

[00000] In a motor vehicle driveline including a transfer case whose output is continually connected to a first output, a clutch, operating partially engaged, responds to a control signal to change the degree of clutch engagement, whereby a second output is connected driveably to the first output. A digital computer continually calculates a change in clutch temperature at frequent intervals and updates a running sum of clutch temperature changes. The control causes the clutch to more fully engage if the current calculated clutch temperature exceeds a predetermined reference clutch temperature.

4/3,AB/4 (Item 4 from file: 654)

DIALOG(R)File 654:US Pat.Full.

(c) Format only 2006 Dialog. All rts. reserv.

5918404

Derwent Accession: 2005-072225

Utility

A E/ **Method and system for controlling a transfer case clutch to avoid wheel slip**

Inventor: Jiang, Hong, Canton, MI
 Sankpal, Bal, Canton, MI
 Thomas, Steven, Bloomfield Hills, MI
 Allen, Timothy, Livonia, MI
 Assignee: Ford Global Technologies, LLC(02), Dearborn, MI
 Ford Global Technologies LLC (Code: 42819)
 Examiner: Camby, Richard M. (Art Unit: 361)
 Combined Principal Attorneys: Kelley, David B.

| | Publication Number | Kind | Date | Application Number | Filing Date |
|-------------|-----------------------|------|----------|-----------------------|----------------|
| Main Patent | US 6834225 | A | 20041221 | US 2004775018 | 20040209 |

self

Fulltext Word Count: 10452

Abstract:

In a motor vehicle driveline including a transfer case whose output is continually connected to a first output, a clutch, operating partially engaged, responds to a control signal to change the degree of clutch engagement, whereby a second output is connected driveably to the first output. A digital computer, repetitively executing a computer readable program code algorithm for operating the clutch partially engaged, continually selects a desired magnitude of clutch engagement with reference to functions indexed by vehicle speed and either engine throttle position or engine throttle rate. The computer repetitively updates at frequent intervals the desired degree of clutch engagement, and issues a command clutch duty cycle to a solenoid-controlled valve, which signal changes the degree of clutch engagement in response to the command signal.

4/3,AB/5 (Item 5 from file: 654)

A DIALOG(R)File 654:US Pat.Full.
 (c) Format only 2006 Dialog. All rts. reserv.

4272247

Derwent Accession: 1997-503194

Utility

M/ **Automobile driving system**

Inventor: Kobayashi, Toshio, Tokyo-To, JP
 Assignee: Fuji Jukogyo Kabushiki Kaisha(03), Tokyo, JP
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| | Publication Number | Kind | Date | Application Number | Filing Date |
|-------------|-----------------------|------|---------------|-----------------------|----------------|
| Main Patent | US 6019695 | A | 20000201 | US 98952700 | 19980325 |
| PCT | WO 9737153 | | 19971009 | WO 97JP1144 | 19970402 |
| | | | 371:19980325 | | |
| | | | 102e:19980325 | | |
| Priority | | | | JP 9680348 | 19960402 |

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|-------------|----------|
| JP 9692271 | 19960415 |
| JP 96125951 | 19960521 |
| JP 96117865 | 19960513 |
| JP 96128223 | 19960523 |
| JP 96120633 | 19960515 |
| JP 96123656 | 19960517 |
| JP 96132207 | 19960527 |

Fulltext Word Count: 48299

Abstract:

Principal components of an automobile driving system for a two-wheel drive vehicle including a torque converter, a belt-type variable-speed transmission, a front differential gear, a transmission case containing these components, a front drive shaft included in a transfer unit, a double-pinion planetary gear, a fixed shaft, a first friction coupling element and a second friction coupling element can be used as the principal components of an automobile driving system for a four-wheel drive vehicle. The automobile driving system for a four-wheel drive vehicle can be constructed by additionally incorporating third, fourth and fifth friction coupling elements, a rear differential gear and a power transmitting mechanism for transmitting power to the rear differential gear into the automobile driving system for a two-wheel drive vehicle.

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